

# NW Bicester

## an eco development

Story so far...

NW Bicester is being designed from first principles to provide a new way of living and working in an eco settlement planned and built to the highest standards of sustainability – using cutting edge construction techniques and making careful choices about design, energy, transport and biodiversity.

### NW Bicester Eco Development:

- 20 year phased development of a zero carbon community of up to 5,000 homes
- Governed by both normal planning systems and stringent sustainability criteria (Government's Eco Town Planning Policy Statement – PPS)
- New business and employment opportunities
- Masterplan to be developed in partnership with local councils, community and business representatives and residents

The NW Bicester Eco Development is being led by P3Eco, an eco development specialist, with a consortium of partners including housing provider, A2Dominion, and with the support of Bicester Town Council, Cherwell District Council and Oxfordshire County Council.

### Exemplar

P3Eco has been encouraged to bring forward a first settlement of a few hundred homes - an Exemplar - to kick start the project and bring immediate benefits to the local area. Following local consultation and in accordance with PPS requirements, P3Eco has developed the plans in this exhibition for consideration by the local community prior to the submission of an Exemplar planning application.



"The NW Bicester Eco Development is an exciting opportunity to provide much needed homes for Bicester and for the town to be at the forefront of eco development, putting us into the spotlight for our contribution to the UK's low carbon economy."

**Cllr Michael Gibbard, Cabinet Member for Planning and Housing, Cherwell District Council**

July 2009	November 2009	February 2010	March 2010	June 2010	September 2010	October 2010	November 2010	Autumn/ Winter 2010/2011	Spring 2011
NW Bicester designated by the Government as one of four 'Eco Towns'.	CDC hosted the Bicester Summit on the future of the town.	Eco Town Fund allocation confirmed – providing £9.7m to CDC to support the Eco Town status.	CDC Core Strategy published for consultation, featuring NW Bicester.	P3Eco's professional team hosted 'Open Planning Week' in Bicester to gather comments and ideas from local residents and community representatives.	P3Eco published 'NW Bicester: Testing Master-planning Ideas' and presented initial ideas for the Exemplar. CDC began consultation on 'Eco Bicester: One Shared Vision'.	P3Eco consultation on more detailed plans for the Exemplar.	P3Eco with A2Dominion will submit Exemplar planning application to CDC for planning consideration.	Ongoing work on the Masterplan for the full development.	Masterplan to be submitted to CDC for planning consideration.

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The Masterplan for NW Bicester is still being developed. It will outline the overall approach to the layout and design for development over the next 20 years

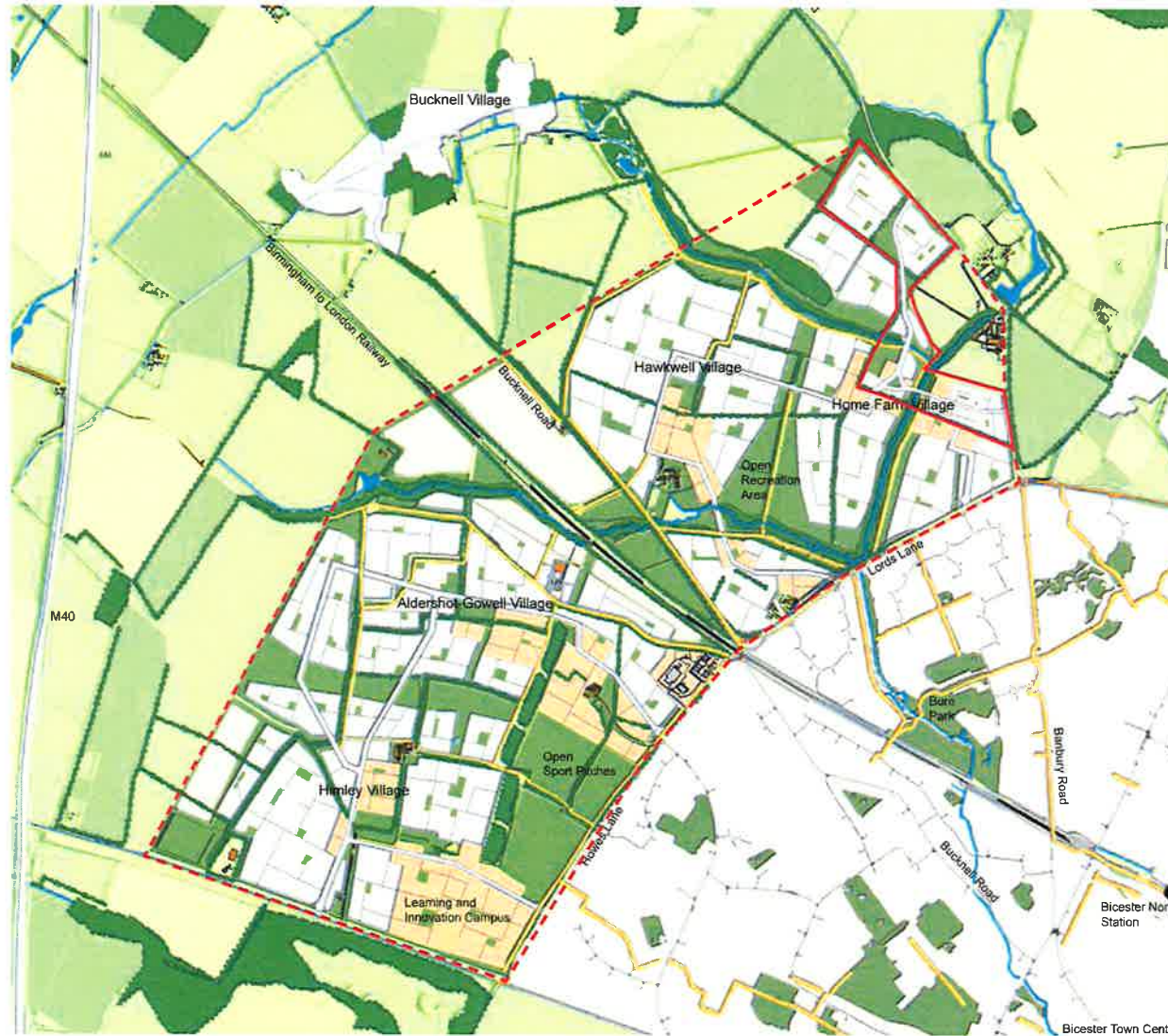
Masterplan

## Four new villages become the focus for the social and cultural infrastructure

- EXISTING FARM BUILDING ARE RETAINED AND BECOME THE HEART AROUND WHICH THE NEW VILLAGE COMMUNITY CENTRES ARE GROWN
- LOCAL CENTRES ARE FOCUSED ON VILLAGE GREENS AND MARKET SQUARES WITH PRIMARY SCHOOLS, ECO BUSINESS CENTRES, ECO PUBS, VILLAGE STORES, SHOPS, NURSERIES AND HEALTH CENTRES
- COMMUNITY AND SHOPPING FACILITIES LOCATED CLOSE TO HOUSING WILL MAKE LOCAL CENTRES INTO THE DESTINATION FOR THE LOCAL COMMUNITIES
- THE CHARACTER OF THE LAYOUT AND PUBLIC OPEN SPACE IN THE NEW VILLAGES IS BASED ON SIMILAR SIZE AND SCALE OF VILLAGES IN THE SURROUNDING OXFORDSHIRE AREA

## Building on existing transport infrastructure

- THE RING ROAD IS HUMANISED WITH NEW CROSSINGS, FRONTAGES, CYCLEWAYS AND ROAD ACCESS TO THE DEVELOPMENT FROM HOWES LANE LORDS LANE, MIDDLETON STONEY ROAD AND BANBURY ROAD
- A NEW CROSSING OVER/UNDER RAIL CREATES A NETWORK OF ROUTES FOR PEDESTRIANS AND CYCLISTS
- NEW SHARED USE OFF-ROAD FOOT AND CYCLE PATHS WILL MAKE BICESTER THE BEST PLACE ON TWO WHEELS
- EXISTING TRACKS AND FOOTPATHS BECOME NEW CONNECTORS TO SURROUNDINGS
- BUILD ON EXISTING BUS AND PUBLIC TRANSPORT INFRASTRUCTURE REDUCING THE RELIANCE ON THE PRIVATE CAR



## “Working with the laws of nature” - landscape as the primary infrastructure

- EXISTING HEDGEROW, STREAM, POND AND WOODLAND HABITATS CONSERVED, ENHANCED AND INTEGRATED INTO GREEN INFRASTRUCTURE AND THE NEW DEVELOPMENT?
- 40% OF THE DEVELOPMENT WILL BE GREEN INFRASTRUCTURE INCREASING THE BIODIVERSITY OF THE AREA
- ALLOTMENTS WILL MAKE LOCALLY GROWN FOOD ACCESSIBLE TO LOCAL COMMUNITIES AND EDUCATE CHILDREN AND YOUNG PEOPLE ABOUT THEIR LOCAL ENVIRONMENT
- LANDSCAPE AMENITY SPACE, WILL PROVIDE OPEN RECREATION AREA ENSURE THAT EVERYONE HAS ACCESS TO THE NATURAL ENVIRONMENT

## Growing the social infrastructure

- A NEW ECO-DEVELOPMENT EXTENDING THE TOWN WITH 5000 ZERO CARBON HOMES GROWN AROUND EXISTING FARMSTEADS
- A NEW SECONDARY SCHOOL LOCATED TO MAXIMISE CATCHMENT AREA AND WITH PROXIMITY TO SPORT PITCHES AND SPORT AND FITNESS CENTRE
- A LEARNING AND INNOVATION CAMPUS LINKED TO OXFORD AND CHERWELL VALLEY COLLEGE LOCATED WITH GOOD ACCESSIBILITY TO BICESTER TOWN STATION
- SEVERAL POSSIBLE LOCATIONS ARE PROVIDED FOR WOODLAND CEMETERIES
- RENEWABLE ENERGY PRODUCTION IS HARNESSSED LOCALLY FROM BIOMASS AND OR PV SOLAR ARRAY
- EXISTING BUSINESSES RETAINED AND NEW EMPLOYMENT CREATED AND DISPERSED ACROSS ALL LOCAL CENTRES

— Exemplar  
- - - Masterplan

# NW Bicester

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What is the Exemplar?

The Exemplar is the first community in the NW Bicester Eco Development. It will kick start 'Eco Bicester' and provide 420 homes, 30% of which will be affordable housing, and community facilities and employment.

Each phase of the NW Bicester project will be designed as a stand-alone development enabling residents to consider a smaller scale planning application rather than signing up at this early stage to the whole 20 year plan.

Eco technologies and Government requirements may also change over the years so P3Eco's approach to development at NW Bicester will be gradual, consulting each step of the way with the local community so that they are comfortable with the proposals.

The Exemplar site is 51 acres and will bring to life the look and feel of the first 'village' in the NW Bicester Eco Development. Following feedback from this consultation, the following proposals will form the basis of a planning application to be submitted in November 2010.



**The site for the Exemplar has been chosen for the following reasons:**

- It is big enough to be the first "village" and support a commercial hub
- It leaves workable fields for the farmers and Home Farm intact
- Land ownership tied to timescales
- The landscape – field patterns, hedgerows and preservation of biodiversity within them

# NW Bicester an eco development

The latest Exemplar layout illustrating some of the many features the proposal could deliver

## Connectivity

Access into the site is via a new junction. The housing has been set back from the existing hedgerow. This is to allow a landscaped buffer zone to be planted. Linkages to existing footpaths will be provided.

## Main Movement Corridor

This link connects the site together and creates a loop for public transport access into Bicester.

## Green link

The green link can provide pedestrian and cycle routes, allotments and food production, support play space and improve biodiversity. The link will also provide a connectivity to Bicester in later stages.

## Hedgerows

The existing hedgerows act as biodiversity corridors and will be retained where possible. Openings through the hedgerows will be minimal and only where necessary. The housing has been set back from the hedgerows to respond positively and to allow maintenance which will improve biodiversity.

## Proposed Primary School

We are planning to provide land for a one form entry school with associated sports and play areas. As the surrounding future phases of eco-town develops the school will expand into a two form school to support its enlarged catchment area.

## Layout

The community heart has been located at the heart of the site to minimise walking and cycling distances from the surrounding communities and allow connectivity to later phases of the eco-town. Its position on the high ground allows the community centre's layout to respond to views of local landmarks and creates variety through the surrounding topography. The polyfocal nature of the village green and square makes reference to surrounding villages and will create unique identities. The residential layout has been designed to respond to the orthogonal nature of the hedgerows and field patterns. Variety is created by the introduction of a green link and movement corridors. Houses are positioned to overlook the street scene and green spaces taking advantage of the views and providing a safe environment for all. The ecology of the site has to be respected and retained whilst developing this layout.



## Village Green

A village green for the whole community is located within the community heart. In addition to the school and eco business centre we are planning to provide an eco pub fronting onto the green which will increase the activity around the green and to the streetscape. Houses will look onto the green creating a safe place for the community.

## Village square

The village square will provide a village store, shops, a children's nursery and houses to create a safe place for the community. We also intend to provide a multi-faith centre that can support community uses.

## Watercourse

The watercourse and environs are a unique feature of the site exhibiting rich biodiversity and providing the opportunity for leisure activities.

## Housing

The carbon zero housing design and materials will respond to the local vernacular creating a place that is familiar to local people, inspired by the use of local materials.

## Homezones

Residential settings that promote pedestrian and cycle movement providing a safe and relaxed environment. Where a homezone meets the hedgerows openings which are overlooked have been created improving connectivity on site for pedestrians and cyclists.

## Connectivity to Bicester

Access into the site is via a new junction. The housing has been set back from the existing hedgerow. This is to allow a landscaped buffer zone to be planted. To improve the sites connectivity to Bicester we are planning to reduce the speed limit to part of the B4100 and provide a public footpath to Bure Park.

## Possible Eco business centre

The eco business has been positioned adjacent to the future phase of the eco-town and will act as a stimulator for commercial enterprises and employment.

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Quality material typical of the area will be adopted in order to build a "local" architectural language familiar to the local community



House type A  
Elevational study \_ Materials and Colours



Perspective street view



House type B  
Elevational study \_ Materials and Colours

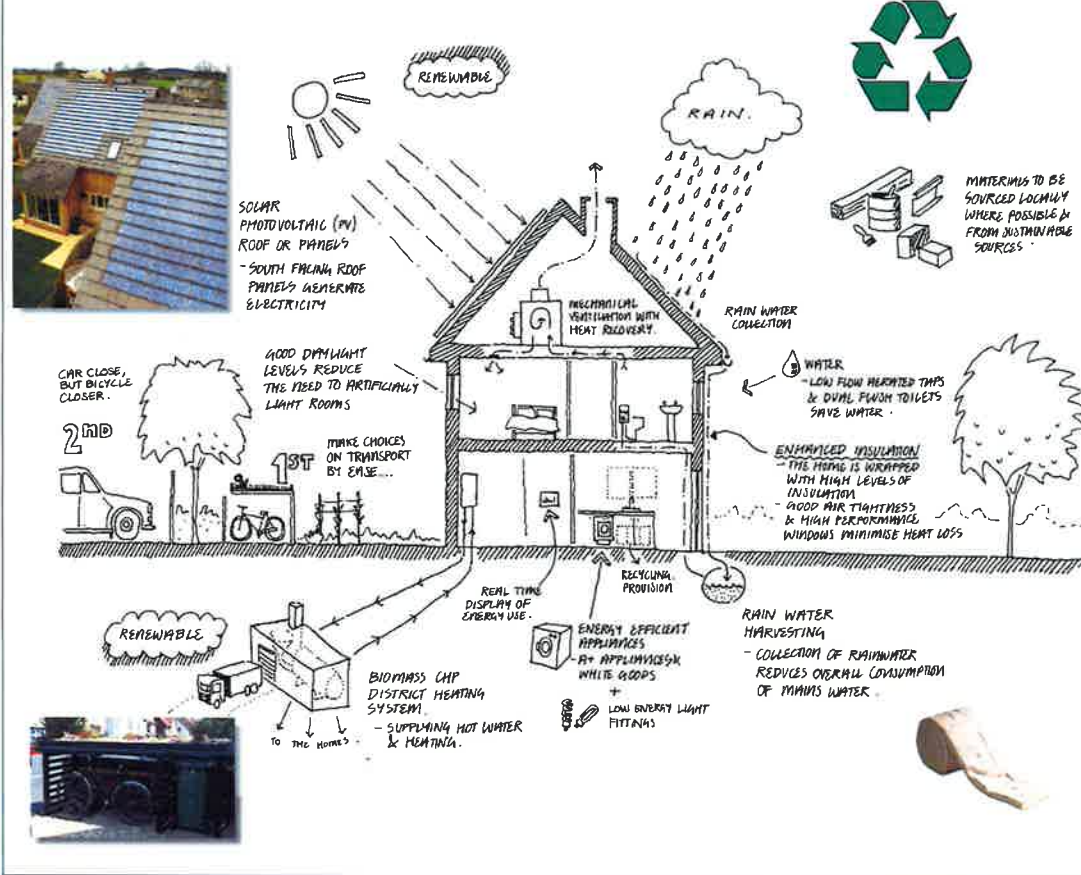


Perspective street view

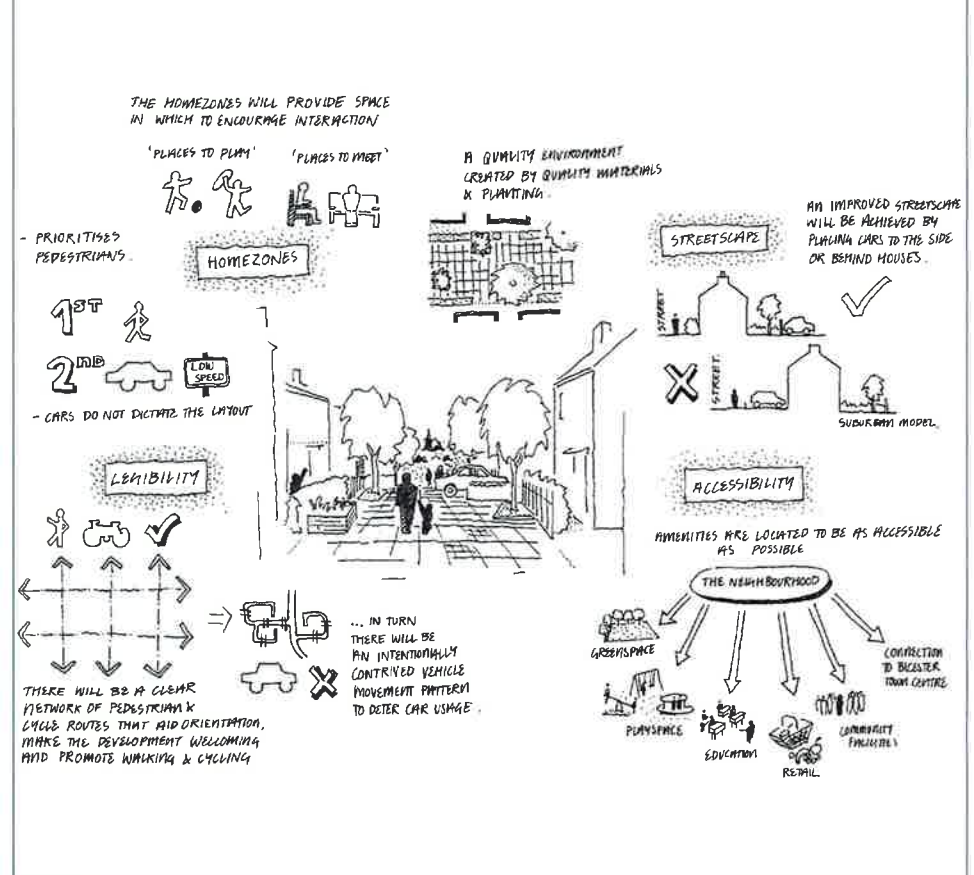
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Creating a setting for the homes.  
Housing and sustainable construction

## Housing and Sustainable Construction.



## Creating a setting for the homes



## Precedents



# NW Bicester

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The Exemplar has been designed “working with the laws of nature” – with landscape as the key driver for the layout of the site. Care has been taken to preserve and enhance hedges and water courses within the development and for the natural landscape to be accessible for residents to enjoy.

The Exemplar incorporates 36% green spaces and more will be provided through private gardens.

### Our strategy for the landscape in the Exemplar will:

- Retain and enhance existing green infrastructure, improving green links and contextual connectivity
- Improve biodiversity through better management and habitat creation
- Integrate SuDS, green corridors, cycleways and community routes
- Create open spaces and public amenity space including a new village green
- Create a new village square maximising views over the existing river corridor
- Maximise retention of species-rich hedgerows, woodland planting and specimen trees
- Improve water course corridor and create areas of new biodiverse wetland
- Provide natural play areas to cater for all age groups
- Provide a lighting strategy that is mindful of secured by design and public safety while remaining sensitive to wildlife (eg bat feeding corridors) and light pollution
- Provide productive, edible landscape through allotment and community gardens and natural foraging areas

Village Green



Village Square



- 1 Retained/improved species-rich hedgerows
- 2 Native buffer planting
- 3 Allotment gardens
- 4 Existing woodland
- 5 Local equipped area for play (LEAP)
- 6 Homezones
- 7 Green Link
  - a. Natural play areas - green mounds & woodland
  - b. Shared surface open space
  - c. Green open space and sustainable drainage
- 8 River corridor
- 9 Water corridor - managed for improved woodland habitat
- 10 School grounds: playing fields, and outdoor classrooms
- 11 Village Green
- 12 Village Square

# NW Bicester an eco development

## Transport: How will the new residents get about?

At previous consultations and in many discussions we have been asked about the impact of new homes on the existing transport infrastructure. As an "eco development" we also need to focus on reducing car use.

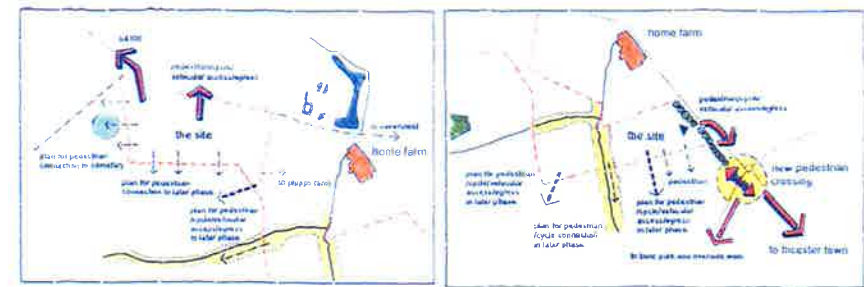
The Exemplar is a small part of the long term proposals for NW Bicester and gives us a chance to test ideas around car use and transport. What we learn will inform later phases of the development.

### Our transport strategy includes:

- Ensuring road links prioritise walkers and cyclists
- Providing sign-posted footways and cycleways which create links within the development and to Bicester
- Providing a 'toucan' crossing on the ring road for pedestrians and cyclists
- Providing a new bus link with Bicester
- Recognising that residents will own cars but not providing parking spaces in front of every home so people make a conscious choice about car use
- Offering personalised travel plans to encourage sustainable travel choices – which have worked well in many similar places
- Considering a car club so people can have car access without ownership
- Promoting car share schemes – which reduce costs and promote community
- Ensuring a shop, primary school, nursery and other services are near to the new homes
- Providing fast broadband services at home to facilitate home working
- Monitoring traffic and travel and amending our green travel plans to reflect real life

### Personalised Travel Plans

We will work with new residents on their individual travel needs so that they know about the full range of good alternatives on offer to getting in their car. This has worked well elsewhere.





Managing the supply and use of water and energy on site, and reducing and carefully disposing of waste are key to making the Exemplar a fully sustainable eco development.

There are ways we can reflect this in how we design the scheme, in how we build the scheme and then how people live their lives in their new homes. Our water, energy and waste strategy reflects all three of these components – to create a **zero carbon community**.

### Our water, energy and waste strategy includes:

- High energy efficiency standards for all buildings – exceeding the standards expected by the Government
- Homes to meet high level of 'Code for Sustainable Homes' – through insulation, good glazing and reduction of heat loss
- Energy created onsite using a renewable energy Combined Heat and Power system (probably biomass) and photovoltaic (PV) panels to create clean electricity
- Designing and constructing homes for water efficiency
- Rainwater harvesting and possible recycling to minimise water use
- Use of 'Sustainable Drainage Systems' (SuDS) which are designed as part of the environment and provide natural habitats
- Mitigate against flood/downstream flood risk and adapt to future climate change in managing surface water
- Improved water quality
- Ambitious waste recycling and re-use targets – backed up by careful management, monitoring and incentives
- Community based composting



Promoting recycling



Sustainable Drainage Systems (SuDS) manage drainage as part of the landscape- providing habitats



Energy created onsite - including through photovoltaic panels

# NW Bicester an eco development

Employment, skills and local business

Creation of employment is a core part of the NW Bicester Eco Development. Not only does it reduce the need for residents to commute and promote a thriving local community, it is also a chance to use the NW Bicester Eco Development to help Bicester re-position itself as an economic centre in its own right. Over the development of the Exemplar, we will aim to provide a minimum of one job per home and work to support a new eco economy for the town.

### The Exemplar will provide a range of job opportunities:

- Construction – niche training and skills in eco construction for NW Bicester and beyond
- Retail and catering
- Teaching and support staff
- Maintenance and other jobs to support the development
- For new and existing businesses in an 'Eco Business Centre'
- By supporting home working and 'work hubs' which provide communal office facilities

### New 'Eco Economy'

To kick start the new 'Eco Economy' for Bicester and to position it as the place to go for eco technology and lifestyles, the Exemplar will support:

- P3Eco's plans to establish a new Research and Innovation Centre in discussion with Oxford Brookes University, the Oxford Institute for Sustainable Development, Oxford Innovation and BioRegional
- New courses at Oxford and Cherwell Valley College in Bicester
- Requirements on contractors to prioritise local employment and local suppliers
- Networks for local businesses

"The opportunity that the Eco Development project brings to engage local businesses, which employ local people, is central to the ethos of sustainability. This scheme creates long term employment opportunities and a sustainable local economy that others should aspire to be a part of."

**Ben Jackson, Chair, Bicester Chamber of Commerce**



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What will make this a community?

P3Eco's aim is for the Exemplar to produce a vibrant, successful, well managed and attractive community which reflects the eco development ethos and has a sense of pride and ownership. A2Dominion, housing provider for the Exemplar, is a national leader in supporting communities and will bring its expertise to NW Bicester.

There will be many different ways that new residents will be able to feel they have ownership of their new community and ways to spend time with their neighbours to help the community thrive.

This could include community governance involving local companies and organisations and volunteers / members of the public playing a full role in the provision and management of community facilities. The sort of areas in which P3Eco and A2Dominion aim to promote community input are as follows:

- Management of open spaces (such as a sports field and allotments)
- Management of buildings and community facilities
- Measurement of performance – e.g. how is the eco development doing in terms of waste, transport, energy?
- Management of energy centre
- Impact of construction processes
- Supporting external interest in eco development, e.g. at a Visitors' Centre

Within the Exemplar and Bicester, there will be chances for residents to access information and education about eco lifestyles so they can make choices in their day to day lives which save money and help reduce energy and water use.



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How will this benefit and become part of the existing town?

The Exemplar, just like the rest of NW Bicester, is designed to enhance and complement existing facilities in Bicester town rather than to compete with or drain existing local resources.

This is a balancing act but P3Eco feels it will achieve this through many aspects of the Exemplar proposals including the following:

- Designing transport to link in with existing town and networks
- Providing new public open space, linked and accessible to all in the Bicester area
- Using eco technologies – a beacon and example of eco living to inspire the local community
- Promoting of a new eco economy that spotlights and brings new jobs to the town
- Prioritising local businesses and local employment
- Making it part of the town community – for instance by making sure that social housing is prioritised for people from the town and their families
- Maintaining a 'town centre focus' – not a rival to it
- Providing homes which match what is needed locally and the local housing market

### Projects already started in Bicester include:

- A 'demo house' at The Garth to showcase technologies
- A new eco community centre at the Church of the Immaculate Conception
- A new sixth form at Cooper School – with new eco buildings
- Travel survey in the town to look at how to reduce reliance on cars



"The NW Bicester Eco Development and early Exemplar is not only an opportunity to put Bicester at the forefront of eco development in Britain, but it is providing the basis and stimulus for other opportunities and compatible growth across the town. It also provides the basis and opportunity for Bicester to become one of the most eco-friendly towns in Europe."

**Bob Langton, Chair, Bicester Vision**